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FEDERAL-STATE-PRIVATE
COOPERATIVE SNOW SURVEYS



WATER SUPPLY OUTLOOK FOR ARIZONA

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Prepared by
U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE
Collaborating with
SALT RIVER VALLEY WATER USERS ASSOCIATION
and
ARIZONA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with the Federal, State and private organizations listed on the last page of this report.

AS OF
FEB. 15, 1971

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR ARIZONA

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

KENNETH E. GRANT

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D. C.

|||||
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STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
PHOENIX, ARIZONA

In Cooperation with

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DIRECTOR
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EXPERIMENT STATION

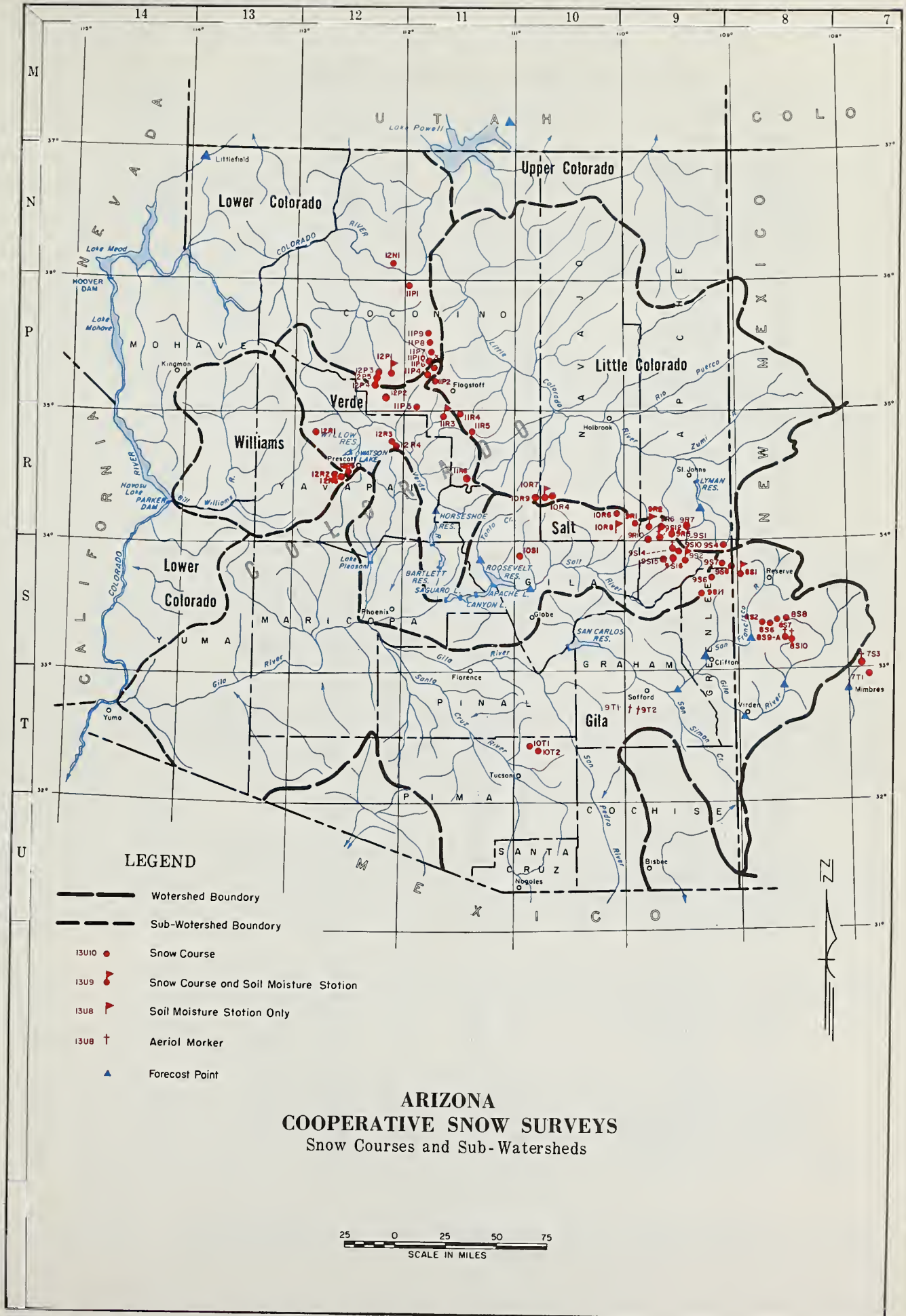
FLOYD N. SMITH

PRESIDENT
SALT RIVER VALLEY WATER
USERS ASSOCIATION

|||||
Report prepared by

RICHARD W. ENZ, Snow Survey Supervisor

SOIL CONSERVATION SERVICE
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INDEX to SNOW COURSES and SOIL MOISTURE STATIONS

NUMBER	NAME	SEC.	TWP.	RGE.	ELEV.	DRAINAGE	OBSERVER
11P10-A	Agassiz	32	23N	7E	11200	Little Colorado	SCS-USBR
11R6	Baker Butte (p)	4	12N	9E	7300	Verde	SCS
9S1-A	Baldy (p)	28	7N	27E	9125	Little Colorado	SCS
9S15	Baldy #2	12	6N	26E	9750	Little Colorado	SCS-FS
9S16	Baldy #3	13	6N	26E	10950	Little Colorado	SCS-FS
10T1	Bear Wallow	6	12S	16E	8100	Gila	FS
9S6	Beaver Head	13	4N	30E	8000	San Francisco	Pvt-SRP
12P5	Bill Williams Intermediate	17	21N	2E	8550	Cataract	FS
12P4	Bill Williams Summit	17	21N	2E	8950	Verde	FS
9S10-*	Black River Divide	10	6N	27E	9400	Salt	SCS
12N1	Bright Angel	34	33N	3E	8400	Bright Angel Creek	NPS
12R1	Camp Wood	3	16N	6W	5700	Verde	FS
10R7-M	Canyon Creek #2	18	11N	15E	7500	Little Colorado	SCS
10R9	Canyon Point (p)	28	11N	14E	7600	Salt	SCS
12P1-M	Chalender	27	22N	3E	7100	Verde	FS
9R7	Cheese Springs	28	8N	27E	8600	Little Colorado	SCS
12R6	Copper Basin Divide (p)	23	13N	3W	6720	Verde	SCS
10R8-*	Corduroy Creek	4	8N	21E	6000	Salt	SCS
9S7	Coronado Trail	26	5N	30E	8000	San Francisco	FS
9T2-A	Crazy Horse	34	8S	24E	10200	Gila	FS
7T1	Emory Pass #1	16	16S	9W**	7800	Mimbres	SCS
7T2	Emory Pass #2	16	16S	9W**	7800	Mimbres	SCS
10R6	Forest Dale	2	9N	21E	6430	Salt	BIA
9R5	Ft. Apache	18	7N	27E	9160	Little Colorado	SCS
11P2	Ft. Valley (p)	22	22N	6E	7350	Little Colorado	FS
8S1-M	Frisco Divide	31	6S	20W**	8000	San Francisco	FS
12R4	Gaddes Canyon	11	15N	2E	7600	Verde	Pvt
11P1	Grand Canyon	21	30N	4E	7500	Hance Creek	NPS
9S11	Hannagan Meadows (p)	19	3N	29E	9090	San Francisco	Pvt
11R5	Happy Jack	30	17N	9E	7630	Verde	FS
9R10	Hawley Lake	13	7N	24E	8300	Salt	BIA
10R4	Heber (p)	28	11N	15E	7600	Little Colorado	SCS
9T1-A	High Peak	34	8S	24E	10500	Gila	FS
8S9-A	Hummingbird	19	11S	17W**	10550	Gila	Pvt-SCS
8S6	Ice King	6	11S	18W**	8020	San Francisco	Pvt-SCS
11P9	Inner Basin #1 (p)	28	23N	7E	10000	Little Colorado	SCS-USBR
11P8	Inner Basin #2 (p)	28	23N	7E	9750	Little Colorado	SCS-USBR
11P7	Inner Basin #3	3	23N	7E	10250	Little Colorado	SCS-USBR
12R2	Iron Springs	22	14N	3W	6200	Bill Williams	SCS
9S2-A	Maverick Fork (p)	13	6N	27E	9150	Salt	SCS
7S3-A	McKnight Cabin	10	15S	10W**	9300	Mimbres	Pvt-SCS
9R2-M	McNary	23	8N	23E	7200	Salt	BIA
9R1	Milk Ranch	33	8N	23E	7000	Salt	BIA
12R3	Mingus Mountain	3	15N	2E	7100	Verde	Pvt
8S2	Mogollon	2	11S	19W**	7000	San Francisco	Pvt
11R4	Mormon Lake	13	18N	8E	7350	Little Colorado	SCS
11R3-M-A	Mormon Mountain (p)	14	18N	8E	7500	Verde	SCS
9S12-A	Mt. Ord	4	6N	26E	11200	Salt	SRP-SCS
11P5-M	Newman Park	25	19N	6E	6750	Verde	SCS
9S4	Nutrioso	23	6N	30E	8500	San Francisco	FS
8S7	Redstone Trail	5	11S	18W**	8600	San Francisco	Pvt
10T2	Rose Canyon	15	12S	16E	7300	Gila	FS
8S8	Silver Creek Divide	4	11S	18W**	9000	San Francisco	Pvt
9S14-A	Smith Cienega	10	6N	26E	10050	Salt	SRP-SCS
11P4	Snow Bowl #1 (p)	36	23N	6E	10260	Verde	FS
11P6	Snow Bowl #2	31	23N	7E	11000	Verde	FS
9S8	State Line	6	6S	21W**	8000	San Francisco	FS
12P2	White Horse Lake Jct.	2	20N	2E	7180	Verde	FS
12R5	White Spar	19	13N	2W	6000	Verde	SCS
8S10-A	Whitewater	19	11S	17W**	10750	Gila	Pvt-SCS
12P3	Williams Ski Run	9	21N	2E	7720	Cataract	FS
9R6	Wilson Lake (p)	4	7N	26E	9000	Salt	SCS
10S1	Workman Creek	33	6N	14E	6900	Salt	FS

M SOIL MOISTURE STA.

(p) STORAGE GAGE

A AERIAL SNOW DEPTH MARKER

* SOIL MOISTURE STA. ONLY

** NM PRINCIPAL MERIDIAN

ARIZONA WATER SUPPLY OUTLOOK

FEBRUARY 15, 1971

* * * * *
* Average to much below average water supplies are in prospect *
* for Arizona. Reservoir storage is average or above except in San *
* Carlos Reservoir, which is very low. Spring runoff will be much *
* below normal from all Arizona watersheds. *
* * * * *

SNOW COVER

With continued mild, dry weather, the snow cover continues to diminish. Snow is almost nonexistent below 9,000' on the Salt and Gila Watersheds, and all-time record low amounts have been reported at the higher elevations. Conditions are somewhat better on the Verde Watershed where snow cover is 32% of average. This compares to 13% on the Salt and 6% on the Gila. The storm presently in progress should improve conditions slightly.

PRECIPITATION

Much below normal precipitation has occurred since November 1. Most watershed stations have received virtually nothing since the first week in January. It is hoped the present storm activity will change this trend. Up to February 15, winter precipitation ranges from 35% of average on the Gila to 55% on the Verde.

SOIL MOISTURE

Soil moisture conditions are good on the Verde, near normal on the Salt, and very dry on the Gila. Moderate precipitation will yield good runoff on the Verde, but very heavy precipitation will be required to produce significant runoff on the Gila.

RESERVOIR STORAGE

Lake Pleasant and Lyman Reservoir contain above normal amounts of water, while San Carlos contains much below normal. Salt River Project reservoirs, at 53% of capacity, are slightly above average. With the extremely low runoff expected this year, most Arizona reservoirs will be below average by summer.

Storage in the Colorado River reservoirs, however, is very good. With over 31 million acre-feet in storage, they contain 67% above average for this date.

STREAMFLOW AND WATER SUPPLY

All streamflow forecasts have been further reduced. The combined flow of the Salt, Verde, and Tonto streams is predicted to be 120,000 acre-feet through May. This is one-third of average. The Gila River at Safford is forecast to flow one-fourth of normal with 22,000 acre-feet. In sharp contrast, the Colorado River runoff April through July is expected to be 17% above average for a total of 7.6 million acre-feet.

Water supplies will be adequate on all projects except San Carlos and along the Upper Gila. Water will be short there and heavy pumping will be required.



ABOUT
STREAMFLOW FORECASTS FEB. 15, 1971

STREAMFLOW FORECASTS		FEB. 15, 1971		THIS YEAR		PAST RECORD	
BASIN STREAM and/or FORECAST POINT		FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET		
		Thousand Acre Feet	Percent of Average		Last Year	Average †	
<u>SALT RIVER DRAINAGE</u>							
Salt near Roosevelt		69.0	29	Feb-May	148.3	239.4	
Tonto Creek near Roosevelt		4.5	15	Feb-May	11.4	29.3	
Verde River above Horseshoe		61.0	44	Feb-May	94.7	139.7	
<u>GILA RIVER DRAINAGE</u>							
Gila River near Gila		13.0	33	Feb-May	25.3	38.3	
Gila River near Solomon		22.0	23	Feb-May	45.5	95.4	
Gila River near Solomon		8.0	21	March	19.3	38.4	
Gila River near Virden		12.0	25	Feb-May	27.0	47.8	
Frisco River at Clifton		12.0	24	Feb-May	23.6	48.7	
Frisco River at Glenwood		4.0	21	Feb-May	7.6	19.5	
<u>MIMBRES RIVER DRAINAGE</u>							
Mimbres River near Mimbres		.7	25	Feb-May	.7	2.8	
<u>COLORADO RIVER DRAINAGE</u>							
Little Colo. River above Lyman Dam		1.3	15	Feb-June	5.9	8.5	
Colorado River -- Lake Powell Inflow *		7610.0	117	Apr-July	8,220.0	6527.0	
<u>VIRGIN RIVER DRAINAGE</u>							
Virgin River nr. Littlefield		40.0	120	Apr-June	12.7	33.4	
<u>GRANITE CREEK DRAINAGE</u>							
Granite Creek		1.1	---	Feb-May	---	---	
Willow Creek		.7	---	Feb-May	---	---	
† Based on the 15-year period, 1953-67							
* Forecast issued by Soil Conservation Service, Salt Lake City, Utah							
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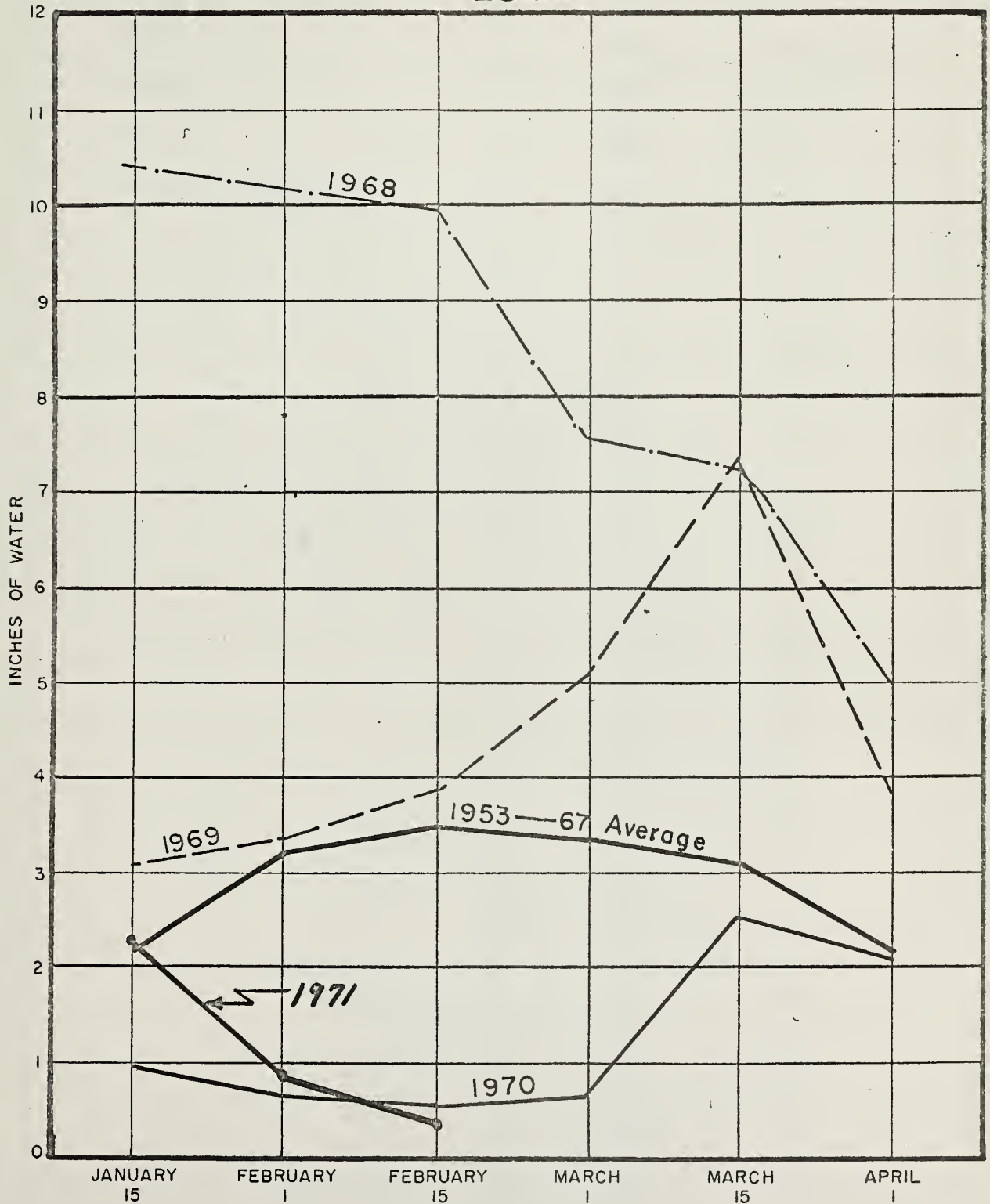
RESERVOIR STORAGE (Thousand Acre Feet) MID-MONTH READING

ABOUT FEBRUARY 15, 1971

RESERVOIR STORAGE (Thousands Ac-ft 1966)

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average†
<u>GILA RIVER DRAINAGE</u>					
Agua Fria	Lake Pleasant	157.6	76.1	71.2	41.9
Granite	Watson Lake	4.7	1.8	1.5	---
Granite	Willow Creek	6.1	1.1	2.3	---
Gila	San Carlos	984.6	10.4	189.9	106.8
Verde (2)	Bartlett & Horseshoe	317.7	154.3	99.4	109.4
Salt (4)	Roosevelt, Apache, Canyon & Saguaro	1755.0	946.9	1276.5	948.0
<u>COLORADO RIVER DRAINAGE</u>					
Colorado	Lake Havasu	619.4	537.3	544.7	536.5
Colorado	Lake Mohave	1810.0	1,628.3	1707.0	1690.0
Colorado	Lake Mead	26159.0	16,653.0	16987.0	16505.2
Colorado	Lake Powell	25002.0	12,375.0	9366.0	---
Little Colorado	Lyman	30.6	11.6	19.4	9.2
Little Colorado	Show Low Lake	5.1	0.3	0.4	1.7*
† Based on 15-year period, 1953-67 * Average is for less than 15 years of record.					
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RELATIVE SNOW WATER ACCUMULATION ARIZONA 1971



This graph represents the average snow water content on eleven selected snow courses on Arizona Sub-Watersheds.

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SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

FEBRUARY 15, 1971

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
Gila	10	15	6
Salt	10	55	13
Verde	10	196	32
Little Colorado	5	62	27
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1971 ARIZONA SNOW COVER BY WATERSHEDS

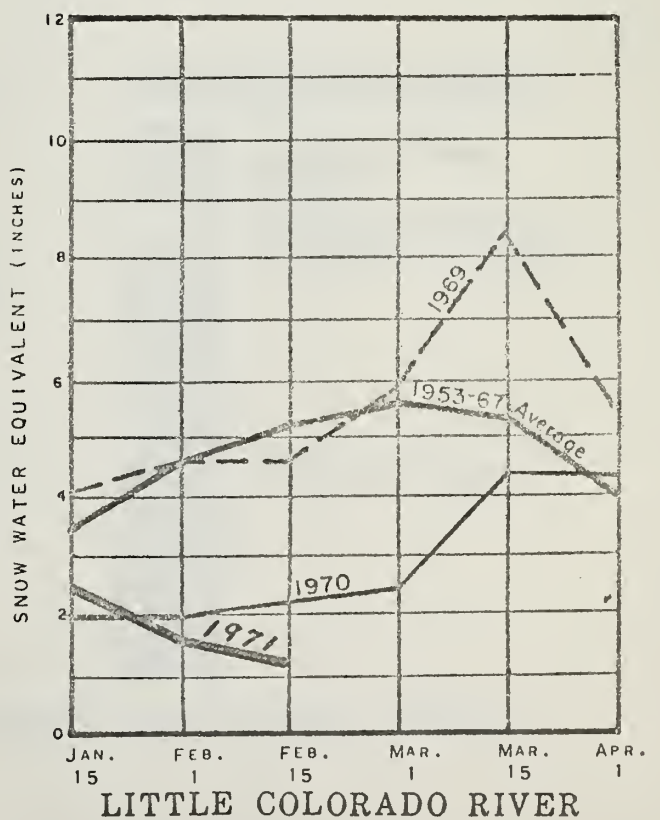
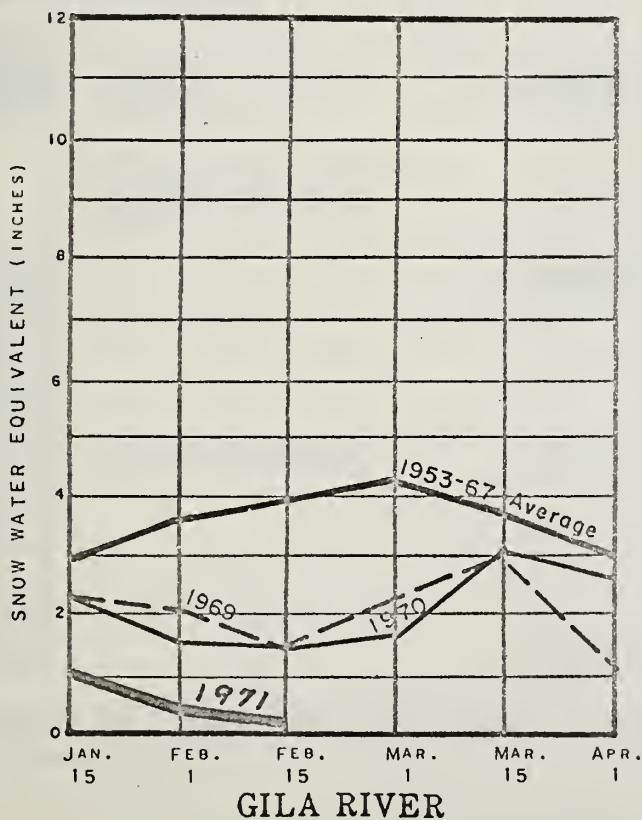
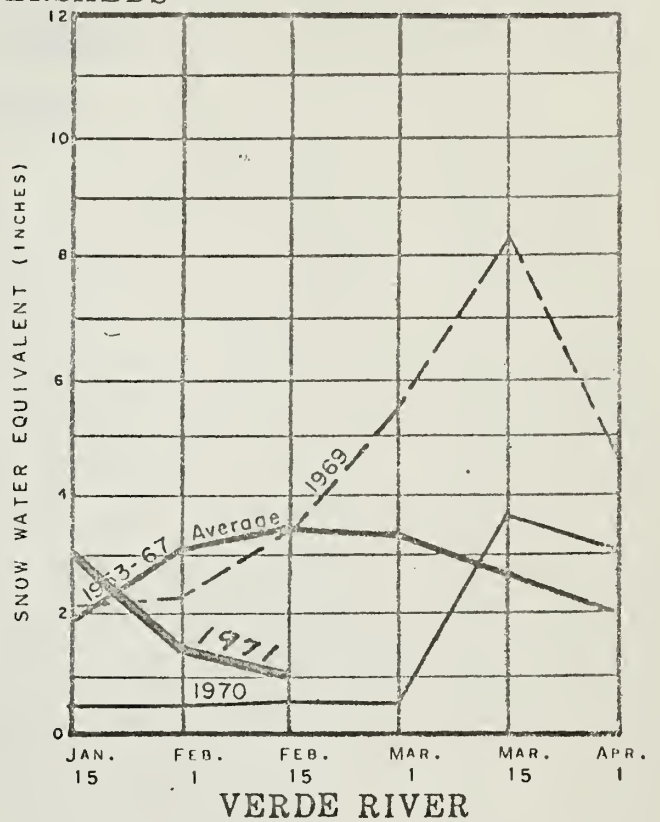
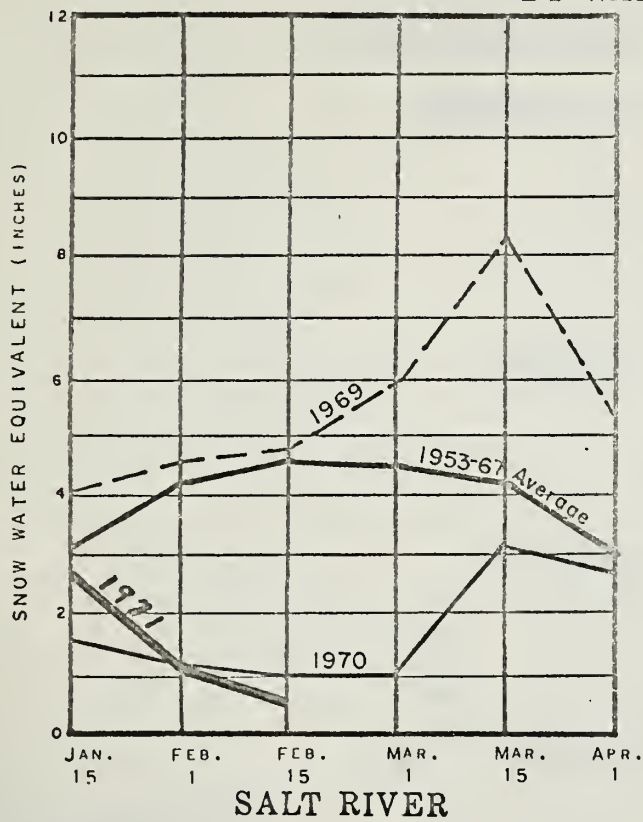




Figure 1



Figure 2

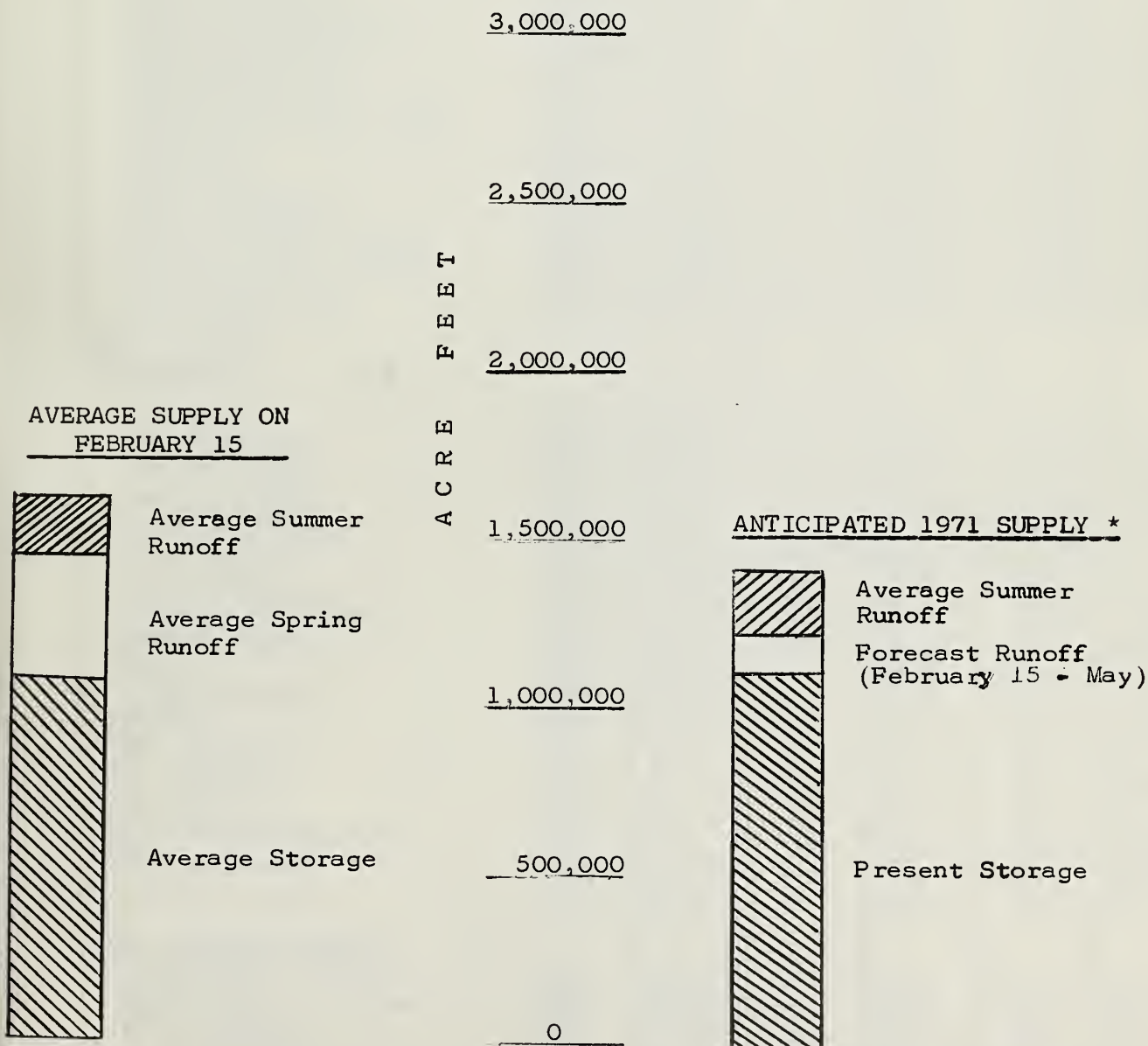


Figure 3



Figure 4

WATER SUPPLY INVENTORY
SALT RIVER VALLEY SYSTEM
FEBRUARY 15, 1971



* Based on Present Storage + Forecast Spring Runoff + Average Summer Runoff

THE ANNALS OF THE ROYAL SOCIETY OF LONDON

1895

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ABOUT FEBRUARY 15, 1971

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average †
<u>GILA RIVER</u>						
Bear Wallow	8100	2/15	0	0.0	0.0	4.3
Beaver Head	8000	2/11	0	0.0	0.0	2.7
Coronado Trail	8000	2/13	0	0.0	0.0	2.3
Crazy Horse (A)	10200	1/15	12	2.5	7.8	---
Emory Pass #1 *	7800	2/12	0	0.0	0.0	---
Emory Pass #2 *	7800	2/12	0	0.0	0.0	---
Frisco Divide	8000	2/12	0	0.0	0.0	2.1
Hannagan Meadows *	9090	2/11	1	0.3	3.9	8.1**
High Peak (A)	10500	1/15	14	2.9	7.8	---
Hummingbird (A)	10550	2/15	0	0.0	8.6	11.8**
McKnight Cabin * (A)	9300	2/15	0	0.0	0.0	---
Mogollon	7000	2/15	0	0.0	0.0	1.9
Nutriosio	8500	2/13	0	0.0	0.0	1.6
Redstone Trail	8600	2/14	1	0.3	4.4	7.0**
Rose Canyon	7300	2/15	0	0.0	0.0	2.8
Silver Creek Divide	9000	2/14	5	1.8	6.8	9.6**
State Line	8000	2/12	0	0.0	0.0	2.2
Whitewater (A)	10750	2/15	12	4.0	10.9	14.1**
<u>SALT RIVER</u>						
Baldy *	9125	2/12	2	0.3	1.7	6.1
Beaver Head	8000	2/11	0	0.0	0.0	2.7
Canyon Creek	7500	2/15	1	0.3	0.0	2.9**
Canyon Point	7600	2/15	1	0.3	0.0	3.5**
Coronado Trail	8000	2/13	0	0.0	0.0	2.3
Forest Dale	6430	2/12	0	0.0	0.0	1.2
Ft. Apache	9160	2/12	10	2.1	3.6	6.5
Hannagan Meadows	9090	2/11	1	0.3	3.9	8.1**
Hawley Lake	8300	2/12	7	2.5	0.6	5.5**
Heber	7600	2/15	1	0.4	0.0	3.0
Maverick Fork	9050	2/12	1	0.2	0.8	7.4
McNary	7200	2/12	0	0.0	0.0	2.5
Milk Ranch	7000	2/12	0	0.0	0.0	1.7
Mt. Ord (A)	11000	---	---	---	---	15.8**
Nutriosio *	8500	2/13	0	0.0	0.0	1.6
Smith Cienega (A)	9850	---	---	---	---	11.0**
Wilson Lake	9000	2/12	17	4.2	5.3	8.2**
Workman Creek	6900	2/11	6	2.3	0.2	4.5
<u>BILL WILLIAMS RIVER</u>						
Camp Wood *	5700	2/12	0	0.0	0.0	0.5
Copper Basin Divide	6720	2/12	0	0.0	0.0	2.1**
Iron Springs	6200	2/12	0	0.0	0.0	0.6

† 1953-67 15-year period. (*) Adjacent drainage. (**) 1953-67 Adjusted average. (A) Aerial observation; Water content estimated.

SNOW ABOUT FEBRUARY 15, 1971

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average †
<u>VERDE RIVER</u>						
Baker Butte	7300	2/15	3	1.6	0.0	5.0**
Camp Wood	5700	2/12	0	0.0	0.0	0.5
Chalender	7100	2/12	1	0.4	0.0	2.5
Copper Basin Divide	6720	2/12	0	0.0	0.0	2.1**
Fort Valley	7350	2/15	0	0.0	0.0	1.8
Gaddes Canyon	7600	2/14	4	1.6	0.0	3.8**
Happy Jack	7630	2/12	0	0.0	0.0	2.7
Iron Springs *	6200	2/12	0	0.0	0.0	0.6
Mingus Mountain	7100	2/14	0	0.0	0.0	0.9
Mormon Lake *	7350	2/12	3	1.2	0.0	3.1
Mormon Mountain	7500	2/12	3	1.3	0.0	3.9
Newman Park	6750	2/12	0	0.0	0.0	1.6**
Snow Bowl #1	10260	2/12	15	4.7	5.5	8.0**
Snow Bowl #2	11000	2/12	17	4.5	7.1	12.5**
White Horse Lake Jct.	7150	2/16	0	0.0	0.0	---
White Spar	6000	2/12	0	0.0	0.0	1.0**
<u>LOWER COLORADO RIVER</u>						
Bill Williams Intermediate	8550	2/16	9	2.7	0.8	---
Bill Williams Summit	8950	2/16	15	4.9	2.5	---
Bright Angel	8400	---	---	---	3.0	---
Chalender *	7100	2/12	1	0.4	0.0	2.5
Fort Valley	7350	2/15	0	0.0	0.0	1.8
Grand Canyon	7500	2/15	0	0.0	0.0	1.7
Williams Ski Run	7720	2/16	10	3.0	0.8	---
<u>LITTLE COLORADO RIVER</u>						
Agassiz	11200	---	---	---	---	---
Baldy	9125	2/12	2	0.3	1.7	6.1
Canyon Creek	7500	2/15	1	0.3	0.0	2.9**
Canyon Point	7600	2/15	1	0.3	0.0	3.5**
Cheese Springs	8600	2/12	11	1.6	3.2	---
Forest Dale	6430	2/12	0	0.0	0.0	1.2
Ft. Apache	9160	2/12	10	2.1	3.6	6.5
Fort Valley	7350	2/15	0	0.0	0.0	1.8
Happy Jack *	7630	2/12	0	0.0	0.0	2.7
Heber	7600	2/15	1	0.4	0.0	3.0
Inner Basin #1	10100	---	---	---	---	---
Inner Basin #2	9750	---	---	---	---	---
Inner Basin #3	10250	---	---	---	---	---
McNary	7200	2/12	0	0.0	0.0	2.5
Mormon Lake	7350	2/12	3	1.2	0.0	3.1
Mormon Mountain	7500	2/12	3	1.3	0.0	3.9
Nutriosio	8500	2/13	0	0.0	0.0	1.6
Snow Bowl #1	10260	2/12	15	4.7	5.5	8.0**
Snow Bowl #2	11000	2/12	17	4.5	7.1	12.5**
Wilson Lake *	9000	2/12	17	4.2	5.3	8.2**

† 1953-67 15-year period. (*) Adjacent drainage. (**) 1953-67 Adjusted average. (A) Aerial observation: Water content estimated



SNOW P I L L O W D A T A

BAKER BUTTE

Elevation: 7300

WATER CONTENT IN INCHES

WATER CONTENT IN INCHES

10

8

6

4

2

0

10

8

6

4

2

0

NOVEMBER

DECEMBER

JANUARY

FEBRUARY

MARCH

APRIL

1969

1971

1970



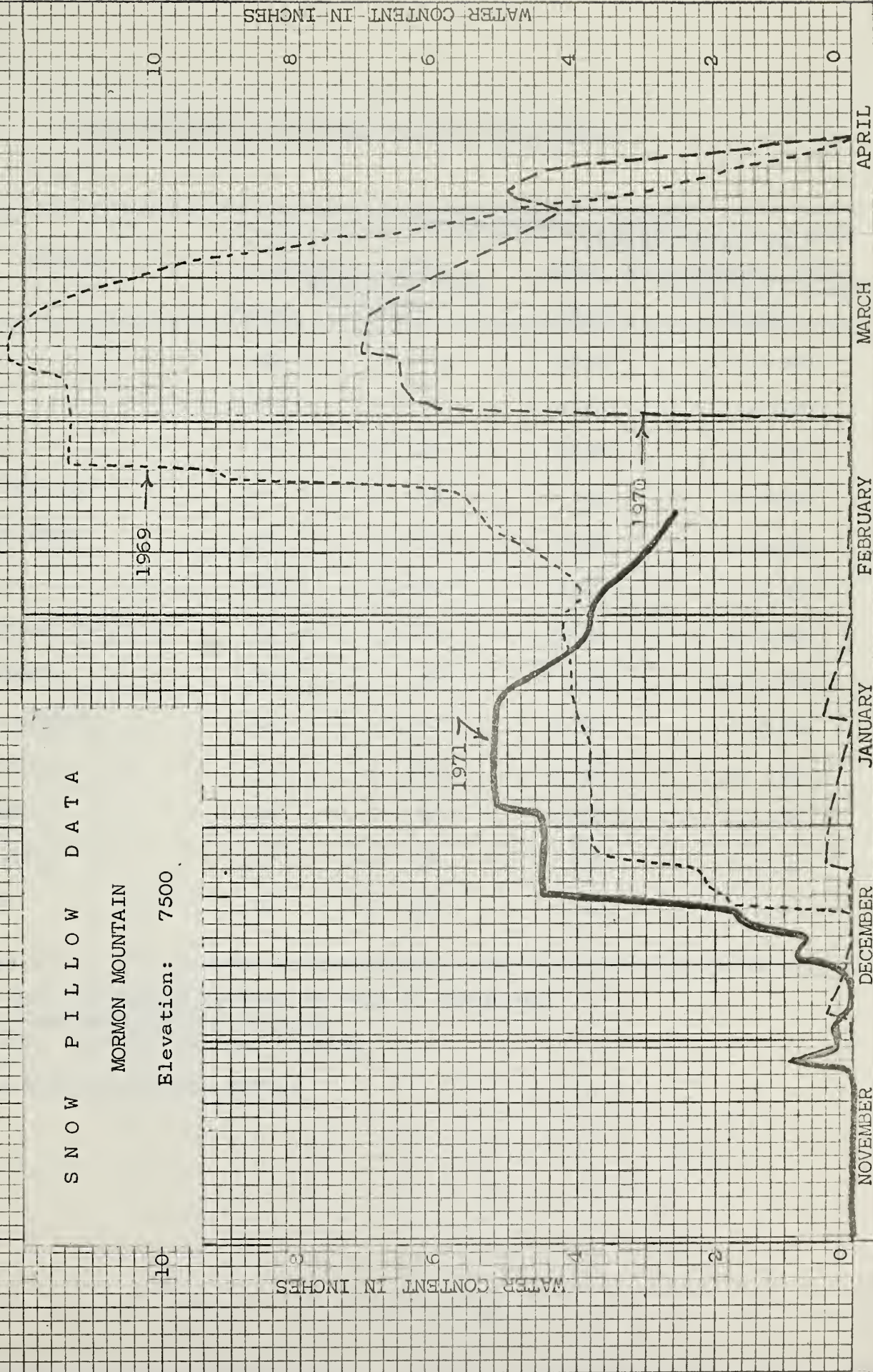
S N O W P I L L O W D A T A

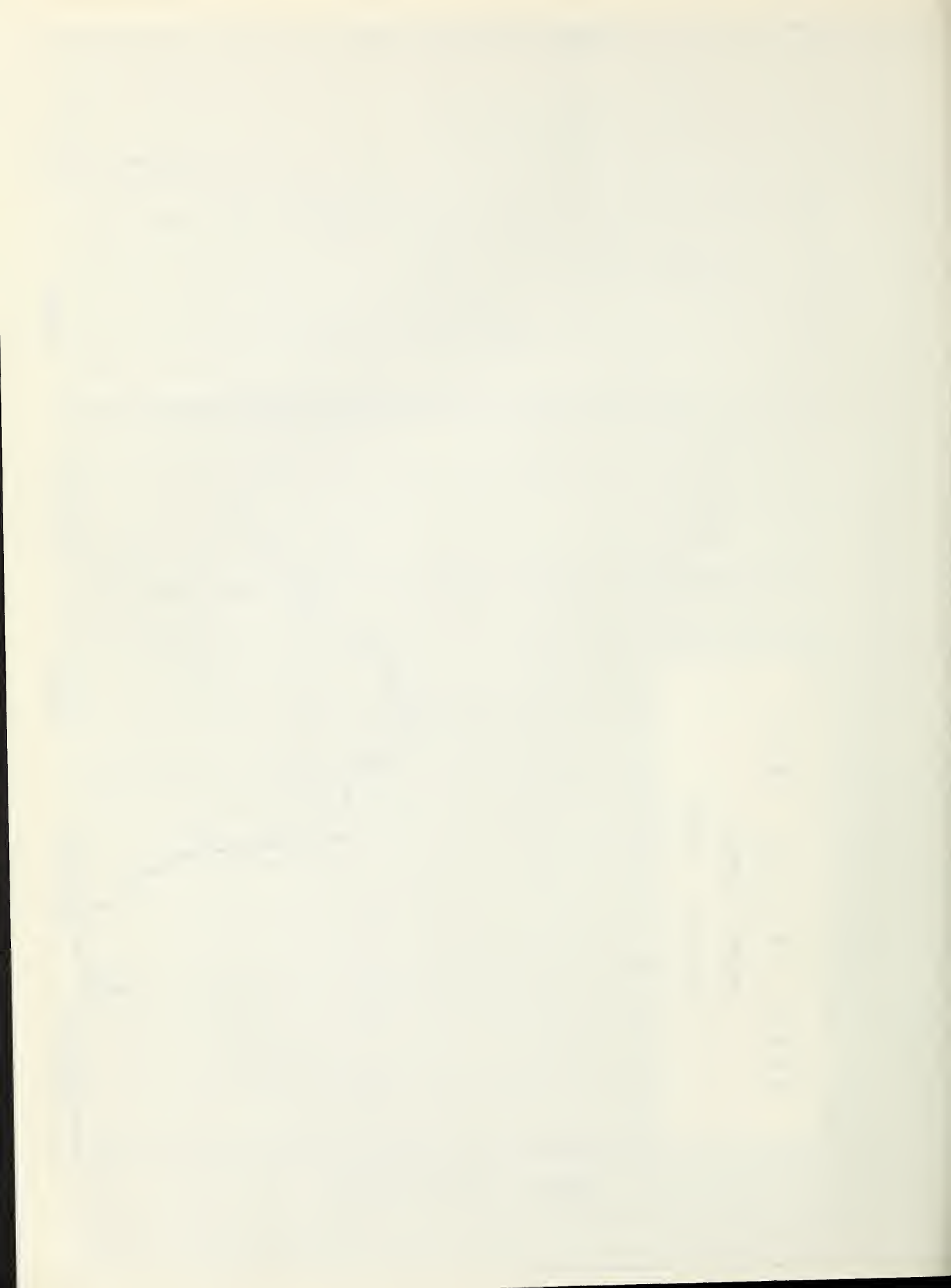
MORMON MOUNTAIN

Elevation: 7500

WATER CONTENT - IN INCHES

WATER CONTENT IN INCHES





PRECIPITATION AT SELECTED ARIZONA STATIONS 1/

STATION	Precipitation - Inches			
	January - 1971		Current Water Year (Oct. 1970-January 1971)	
	Departure from		Departure from	
	Total	Normal	Total	Normal
Alpine	.58	- 1.02	3.55	- 1.85
Ash Fork	0	- 1.02	1.73	- 1.89
Clifton	0	- .91	2.30	- 1.07
Douglas Smelter	0	- .72	.46	- 2.03
Flagstaff WSO*	.08	- 1.75	3.68	- 2.32
McNary	.87	- 1.59	5.48	- 2.62
Payson Ranger Station	.40	- 1.72	2.95	- 3.92
Phoenix WSO*	.22	- .51	.94	- 1.59
Prescott (City)	.04	- 1.94	2.27	- 3.78
Springerville	T	- .71	1.57	- .87
Tucson WSO*	.04	- .78	2.20	- .80
Winslow WSO*	.07	- .36	.56	- 1.41
Yuma WSO*	.04	- .35	.09	- 1.12

1/ Data and Analysis furnished by Paul C. Kangieser
 NOAA Climatologist for Arizona
 National Weather Service, Phoenix

* WSO - Weather Service Office

PRECIPITATION (Inches)

ABOUT FEBRUARY 15, 1971

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION			FROM APPROX. NOV. 1 TO DATE		
		Date of Reading	Month's Precipitation	Average †	This Year	Average †	Percent of Average
<u>GILA RIVER</u>							
Silver Creek Divide	9000	2/14	.15	---	3.20	---	---
Hannagan Meadows	9030	2/11	.11	1.10*	3.12	9.00*	35
<u>SALT RIVER</u>							
Canyon Point	7600	2/15	.15	---	7.74	---	---
Hannagan Meadows	9030	2/11	.11	1.10*	3.12	9.00*	35
Little Wildcat (Heber Snow Course)	7600	2/14	.10	1.15*	5.59	10.22*	54
Maverick Fork	9050	2/12	.15	1.12*	4.25	8.81*	48
Workman Creek **	6970	2/11	0	1.42	6.25	12.46	50
Wilson Lake	9100	2/12	.25	---	4.10	---	---
<u>VERDE RIVER</u>							
Baker Butte	7300	2/14	.08	---	5.82	---	---
Copper Basin Divide	6720	2/12	0	---	4.13	---	---
Fort Valley **	7350	2/15	.02	.83	3.59	6.43	56
Happy Jack **	7480	2/12	T	1.07*	4.39	7.79*	56
Mingus Mountain	7660	2/14	0	1.01	3.82	6.73	57
Mormon Mountain	7500	2/12	.15	---	7.89	---	---
<u>LITTLE COLORADO</u>							
Inner Basin #1	9830	---	---	---	---	---	---
Inner Basin #2	10050	---	---	---	---	---	---
Sheep Crossing (Baldy Snow Course)	9125	2/12	.17	1.00*	3.62	8.43*	43
Little Wildcat (Heber Snow Course)	7600	2/14	.10	1.15*	5.59	10.22*	54
† 1953-67 Average * Adjusted Average ** Data Supplied by U.S. Forest Service							
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SOIL MOISTURE ABOUT FEBRUARY 15, 1971

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average †
<u>GILA RIVER</u>							
Frisco Divide	8000	48	13.3	2/12	5.9	9.8	10.8
<u>SALT RIVER</u>							
Black River Divide	9100	48	16.8	2/12	18.3	17.8	15.4
Canyon Creek	7500	48	18.3	2/15	17.6	17.1	15.2
Corduroy Creek	6000	36	13.5	2/12	8.3	9.3	8.3
McNary	7200	48	16.3	2/12	14.8	13.8	14.3
<u>VERDE RIVER</u>							
Mormon Mountain	7500	48	16.1	2/12	14.9	16.5	15.4
Newman Park	6750	48	17.7	2/12	18.4	12.4	15.3
† 1953-67 15-year average							
- 14 -							



SNOW COURSE

Baker Butte
Baldy
Bear Wallow
Beaver Head
Bill Williams Intermediate
Bill Williams Summit
Bright Angel
Camp Wood
Canyon Creek
Canyon Point
Chalender
Cheese Springs
Copper Basin Divide
Coronado Trail
Crazy Horse
Emory Pass #1 and #2
Forest Dale
Ft. Apache
Fort Valley
Frisco Divide
Gaddes Canyon
Grand Canyon
Hannagan Meadows
Happy Jack
Hawley Lake
Heber
High Peak
Hummingbird
Inner Basin #1, #2, #3
Iron Springs
Maverick Fork
McKnight Cabin
McNary
Milk Ranch
Mingus Mountain
Mogollon
Mormon Lake
Mormon Mountain
Mt. Ord
Newman Park
Nutrioso
Redstone Trail
Rose Canyon
Silver Creek Divide
Smith Cienega
Snow Bowl #1 and #2
State Line
White Horse Lake Junction
White Spar
Whitewater
Williams Ski Run
Wilson Lake
Workman Creek

SNOW SURVEYOR

SCS - Dick Enz
SCS - Bill Cole
Forest Service - Carl Sollers
N. A. Josh
Forest Service - John Sotelo
Forest Service - John Sotelo
National Park Service - Kenneth Hulick, Dist. Rgr.
Forest Service - Walter G. Richardson
SCS - Dick Enz
SCS - Dick Enz
Forest Service - M. Freshour
SCS - Bill Cole
SCS - Bill Gray
Forest Service - John O. Maeder
Forest Service - Loyd Barnett
SCS - Jim Powell and Travis Stevenson
Bureau of Indian Affairs - Raymond Endfield
SCS - Bill Cole
Rocky Mtn. Forest & Range Exp. Station
Forest Service - J. M. Sanchez
Paul G. Lidbeck
National Park Service - David A. Strobe, Dist. Rgr.
N. A. Josh
Forest Service - Warren Harris
Bureau of Indian Affairs - Raymond Endfield
SCS - Dick Enz
Forest Service - Loyd Barnett
Ray Freeman
SCS and USBR - Jack Jorgensen and Jay Roberts
SCS - Bill Gray
SCS - Bill Cole
Ray Freeman
Bureau of Indian Affairs - Raymond Endfield
Bureau of Indian Affairs - Raymond Endfield
Paul G. Lidbeck
James Lyon
SCS - Jack Jorgensen
SCS - Jack Jorgensen
Salt River Project - Bill Warskow
SCS - Jack Jorgensen
Forest Service - John O. Maeder
James Lyon
Forest Service - Carl Sollers
James Lyon
Salt River Project - Bill Warskow
Forest Service - Ky Porter
Forest Service - J. M. Sanchez
Forest Service - John Sotelo
SCS - Bill Gray
Ray Freeman
Forest Service - John Sotelo
SCS - Bill Cole
Rocky Mtn. Forest & Range Exp. Station



The Following Organizations Cooperate in the Arizona Snow Survey Work

FEDERAL

Department of Agriculture

Soil Conservation Service

Forest Service

Apache Forest

Coconino Forest

Coronado Forest

Gila Forest

Kaibab Forest

Prescott Forest

Rocky Mountain Forest and Range Experiment Station

Tonto Forest

Department of Commerce

Weather Bureau

Arizona Section

Department of Interior

Bureau of Reclamation

Region III

Geological Survey

Arizona District

Bureau of Indian Affairs

Fort Apache Reservation

San Carlos Irrigation Project

National Park Service

Grand Canyon National Park

Gila Water Commissioner

Safford, Arizona

STATE

University of Arizona

Arizona Agricultural Experiment Station

Water Resource Research Center

IRRIGATION PROJECTS

Salt River Valley Water Users' Association

Phoenix, Arizona

San Carlos Irrigation and Drainage District

Coolidge, Arizona

PRIVATE

Southwest Forest Industries, Inc.

McNary, Arizona

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

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